

AMENDMENTS TO THE SPECIFICATION

Please replace the paragraph beginning at page 4, line 6, with the following rewritten paragraph.

-- With a view toward overcoming such drawbacks of conventional methods and apparatus for vibration isolation, the inventors of the present invention have already proposed a method and apparatus for vibration isolation with high rigidity that withstands direct disturbances while maintaining the vibration isolation function for ground disturbances necessary for precision machining using the derived high vibration isolation function (see Publication of unexamined patent application No. 2002-81498). ~~-81498-2002-~~ --

Please replace the paragraph beginning at page 15, line 19, with the following rewritten paragraph.

-- Embodiments of the method and apparatus for vibration isolation of the present invention are described below referring to the drawings. The present invention provides almost infinite rigidity against direct disturbances occurring on the equipment and isolates vibration of the floor (bed) by employing two supporters with positive and negative spring characteristics that are connected in series and another supporter with positive spring characteristics that is installed in parallel with said two-part supporter. Further, it is not necessary for the magnetic levitation mechanism to support the entire (or even part of) the load acting on the vibration-isolating table. This allows use of much smaller magnets to reduce manufacturing costs significantly. Embodiment 1 is described below. The magnetic levitation mechanism with zero-power characteristics is used as the supporter with negative spring characteristics in the first embodiment. The present invention is based on the basic structure and operation of the magnetic levitation mechanism with zero-power characteristics inclusive of electromagnets described in the patent literature 1 (Publication of

unexamined patent application No. 2002-81498). ~~81498-2002~~). The principle of the magnetic levitation is not described here because it is not the essential part of the present invention. --

Please replace the paragraph beginning at page 16, line 26, with the following rewritten paragraph.

-- The vibration isolation apparatus of Embodiment 1 comprises the vibration-isolating table 3 supported on the floor 1 by the spring with specified positive spring characteristics k_3 and the vibration-isolating table 3 supported on the intermediate plate 2 by the magnetic levitation mechanism 4 with specified negative spring characteristics k_s and zero-power characteristics comprising permanent magnets and electromagnets. In the example shown, the attraction of the electromagnets 7 installed on the intermediate plate 2 can be varied using a suitable controller (not shown) according to changes in the load caused by changes, such as changes in the mass, acting on the vibration-isolating table 3 on which the permanent magnets 6 are installed. Further, it is not necessary for the magnetic levitation mechanism 4 to support the entire (or even a part of) load acting on the second member 3. The electromagnets 7 are installed on the intermediate plate 2 and the permanent magnets 6 are installed on the vibration-isolating table 3 in this example. These magnets may be installed in reversed positions or installed together on one side. As stated in detail in the patent literature 1, said controller comprises displacement sensors, control circuits and power amplifiers. The same configuration of electromagnets and permanent magnets described in the patent literature 1 (Publication of unexamined patent application No. 2002-81498) ~~81498-2002~~) can be used in the embodiments of the present invention. --

Please replace the paragraph beginning at page 25, line 23, with the following rewritten paragraph.

-- If, for example, a vibration isolator of six degrees of freedom is constructed using the above-mentioned embodiments, the structure proposed and described in the publication of

unexamined patent application No. 2002-81498 ~~81498-2002~~ of the inventors of the present invention has been adopted. --

Please replace the paragraph beginning at page 25, line 29, with the following rewritten paragraph.

-- For the hybrid electromagnets oriented perpendicular (or the magnetic levitation mechanism with zero-power characteristics; simply termed "magnetic levitation mechanism" hereafter), a large hybrid electromagnet must be used to support the mass of the intermediate plate and the vibration-isolating table. For the horizontal arrangement, on the other hand, a backside ~~backsight [backside??]~~ differential structure is employed because the system need not support gravity. Two combinations of positive and negative rigidity must be studied when developing a vibration-isolating table. --